

ABSTRACT

[Problem to be solved] In a plasma processing apparatus for executing a process using plasma, promoting the sharing of an apparatus in executing a plurality of different processes and plasma states amongst apparatuses in executing same processes in a plurality of apparatuses are provided.

[Solution] A ring member formed of an insulating material is disposed to surround a to-be-treated substrate in a processing vessel and an electrode is installed in the ring member for adjusting a plasma sheath region. For example, a first DC voltage is applied to the electrode when a first process is performed on the to-be-treated substrate and a second DC voltage is applied to the electrode when a second process is performed on the to-be-treated substrate. In this case, the plasma state can be matched by applying an appropriate DC voltage according to each process or each apparatus executing the same process. Therefore, the sharing of an apparatus can be promoted and the plasma state can be readily adjusted.

[Selected Figure] Fig. 1